

# Notice of Allowability

Application No.

10/051,199

Examiner

Gregg Cantelmo

Applicant(s)

ASANO ET AL.

Art Unit

1745

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE 12/01/05 and interview 2/22/05.
2. ☒ The allowed claim(s) is/are 1 and 3-13.
3. ☒ The drawings filed on 22 February 2002 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                 |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date <u>2/22/05</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance                        |
|   | 9. <input type="checkbox"/> Other _____.  |

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Bruce E. Kramer on February 22, 2005.

The application has been amended as follows:

- a. In claim 1, at line 4, after "polyarylene polymer", insert -- and constitutes 50-95 wt% of the electrolyte membrane--;
- b. Cancel claim 2;
- c. In claim 13, at line 7, after "polyarylene polymer", insert -- and constituting 50-95 wt% of the electrolyte membrane--;
- d. Cancel claims 14-40.

### ***Allowable Subject Matter***

2. Claims 1 and 3-13 are allowed.

The following is an examiner's statement of reasons for allowance: none of the prior art of record appears to teach, fairly suggest or render obvious the invention of claims 1 or 13. In particular: of the first and second polymer electrolytes, defined in claims 1 and 13 respectively and further wherein the first polymer electrolyte as second polymer electrolytes have different skeleton structures from each other.

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With respect to Goto, Applicant's arguments as to the differences between the instant claims and Goto have been considered and are persuasive for the reasons set forth in the arguments filed October 1, 2004. The term mixture as recited in claim 1 being defined by Applicant's response filed October 1, 2004.

With respect to US '513, while the intentions of amending this application are not persuasive, there is no teaching or suggestion in the prior art of record for the first and second polymer electrolytes in the mixture to have different skeleton structures. One of ordinary skill in the art would have instead found the disclosure of US '513 to teach use of both electrolytes with the same skeleton structure except for ion exchange capacity. This makes the matrix and the reinforcing material have substantially the same thermal expansion coefficient, thereby preventing the matrix from peeling from the reinforcing material. Further each example of US '513 (Examples 5 and 6) teach of using the same materials for both components of the electrolyte.

None of the remaining prior art of record appears to teach or suggest providing an electrolyte mixture as defined in claim 1 wherein the first and second polymer electrolytes in the mixture have different skeleton structures with the first polymer electrolyte constituting 50-95 wt% of the composite electrolyte. Having the first polymer electrolyte in the range of claims 1 and 13 thereof the first polymer electrolyte constitutes 50-95 wt % of the composite electrolyte has a higher Q value and exhibits superior adhesion.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregg Cantelmo whose telephone number is (571) 272-1283. The examiner can normally be reached on Monday to Thursday from 9 a.m. to 6 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. FAXES received after 4 p.m. will not be processed until the following business day. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregg Cantelmo  
Primary Examiner  
Art Unit 1745

gc

A handwritten signature in black ink, appearing to read "Gregg Cantelmo", with a stylized flourish at the end.

February 22, 2005